UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,565	04/04/2006	Tomokazu Hayashi	77661-65	2114

23838 7590 11/13/2008

KENYON & KENYON LLP
1500 K STREET N.W.
SUITE 700
WASHINGTON, DC 20005

EXAMINER	
PARSONS, THOMAS H	

ART UNIT	PAPER NUMBER
1795	

MAIL DATE	DELIVERY MODE
11/13/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/574,565	HAYASHI ET AL.	
	Examiner	Art Unit	
	THOMAS H. PARSONS	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 September 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Amendment

This is in response to the Amendment filed 11 September 2008.

(*Previous*) DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

page 9, line 20, suggest inserting "(Fig. 7)", after "modules are piled". (See the paragraph on page 9, beginning "The MEA and the separator 18 are layered to construct a unit fuel cell 19,...").

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The rejections of claims 14-21 under 35 U.S.C. 102(e) as being anticipated by Kikuchi et al. (6,833,210) have been **withdrawn** in view of Applicants' Amendment.

Response to Arguments

3. Applicant's arguments with respect to claims 14-21 have been considered but are moot in view of the new ground(s) of rejection.

(New) Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (US 6,833,210) in view of Inoue et al. (US 20020055027).

Claim 14: Kikuchi et al. disclose seal structure of a fuel cell, the fuel cell including an MEA (3), a separator (4A or 5A), a gas passage (4a or 5a) formed in separator, a gas manifold (17, 18) formed in the separator, a connecting gas passage formed in the separator and between the gas passage and the gas manifold, a coolant passage (4a or 5a) formed in the separator, a coolant manifold (19) formed in the separator, a connecting coolant passage formed in the separator and between the coolant passage and the coolant manifold, and a seal (6A, 7A, and 27) for preventing gas and/or coolant from leaking and defining a continuous seal line, the seal structure of a fuel cell comprising an interrupted back-up (29) disposed at at least one of the connecting gas passage and the connecting coolant passage, the back-up located on one side of the separator and a portion of seal line located on the other side of the separator being disposed such that said back-up and the portion of the seal line are overlapped with each other in a fuel cell stacking direction, characterized in that the back-up is formed in the separator (i.e. integrated) and includes a rib having a convex and concave structure (Fig. 11, and col. 14: 3-6), wherein the back-up is integrally formed in the separator (col. 14: 1-6). See also entire document, in particular, col. 6: 12-col. 11: 24.

Kikuchi et al. do not disclose that the separator is made from metal.

Inoue et al. in paragraphs [0017]-[0020] disclose a fuel cell comprising a separator made from a metal.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted the carbon separator with the metal separator of Inoue et al. because Inoue et al. teach a metal separator that would have provided flexibility, thereby inhibiting breakage.

Claim 15: Kikuchi et al. in Figures 2-4 disclose that the back-up is disposed at connecting gas passage between the gas passage and the gas manifold. See also Figures 12-14.

Claim 16: Kikuchi et al. in Figure 4 disclose that the back-up is disposed at said connecting coolant passage between said coolant passage and said coolant manifold. See also Figures 12-14.

Claim 17: Kikuchi et al. in Figures 2-4 disclose that the, wherein though said gas manifold and the coolant manifold differs in width to each other, the interrupted back-up and a portion of the seal line positioned in an extension of the interrupted back-up are disposed on a same straight line. See also Figures 12-14.

Claim 18: Kikuchi et al. in Figures 2-4 disclose that the back-up is formed in the separator (integrated) and includes a plurality of protrusions spaced from each other. See also Figures 12-14.

Claim 19: Kikuchi et al. in Figures 2-4 disclose that the back-up is formed in the separator (i.e. integrated) and includes a rib having a plurality of tunnels formed in the rib and spaced from each other (e.g. Figure 11).

Claim 20: Kikuchi et al. in Figures 2-4 disclose that an entire portion of the back-up located between adjacent separators is formed (i.e. integrated) in either one separator of the adjacent separators. See also Figures 12-14.

Claim 21: Kikuchi et al. in Figures 2-4 disclose that a portion of the back-up located between adjacent separators is formed in one separator of the adjacent separators (i.e. integrated) , and a remaining portion of the back-up located between adjacent separators is formed in the other separator of the adjacent separators. See also Figures 12-14.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS H. PARSONS whose telephone number is (571)272-1290. The examiner can normally be reached on M-F (7:00-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PATRICK RYAN/
Supervisory Patent Examiner, Art Unit 1795

Thomas H Parsons
Examiner
Art Unit 1795

***